AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-316

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

In this edition:
* New ANS News Editor
* Upcoming ARISS Contact Schedule
* NASA activates UHF SDR on MRO
* Want Eagle to be built and launched?
* PCSAT-3 Digital Design Help Needed
* GENSO

SB SAT @ AMSAT $ANS-316.01
New ANS Editor

AMSAT News Service Bulletin 316.01
From AMSAT HQ SILVER SPRING, MD.
November 12, 2006
To All RADIO AMATEURS
BID: $ANS-316.01

I am pleased to be back in the seat as an editor of ANS. It's been about 18 months since I've done it and it feels like no time has gone by. I hope that
my contribution will go a little way to encouraging and enlightening others about the worldwide AMSAT mission.

On a practical front, I'm involved with preparing the WWW telemetry pages for the ANDE satellite and getting involved with the Global Educational Network for Satellite Operations (GENSO), more details later in this bulletin.

73,
Dave, G4DPZ

[ANS thanks Dave, G4DPZ, for the above information]

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SB SAT @ AMSAT $ANS-316.02
Upcoming ARISS Contact Schedule

AMSAT News Service Bulletin 316.02
From AMSAT HQ SILVER SPRING, MD.
November 12, 2006
To All RADIO AMATEURS
BID: $ANS-316.02

Landesmuseum fuer Technik und Arbeit (Mannheim Museum), Mannheim, Germany
2006-11-20 14:42 UTC via telebridge WH6PN Thomas Reiter contact
Watch for live IRLP, Echolink, and webcast.

Centre Hastings Secondary, Madoc, Ontario, Canada, direct via VE3UR
Mon 2006-11-20 16:35 UTC

During Expedition 14, ARISS expects to have one ARISS school contact per month rather than approximately one per week.
It is also anticipated that there many not be many general contacts.

Total number of ARISS school contacts is 255.

QSL information may be found at:
http://www.arrl.org/ARISS/arissfaq.html
http://www.rac.ca/ariss/oindex.htm#QSL's

ISS callsigns: DP0ISS, NA1SS, RS0ISS

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The schedule page has been updated as of 2006-11-08 22:45 UTC. Here you will find a listing of all scheduled school contacts and questions, other ISS
related websites, IRLP and Echolink websites, and instructions for any contact that may be streamed live.
http://www.amsat.org/amsat/ariss/news/arissnews.txt

The successful school list has been updated as of 2006-09-27 02:00 UTC
http://www.amsat.org/amsat/ariss/news/Successful_ARISS_schools.rtf

Frequency chart for packet, voice, and crossband repeater modes showing Doppler correction as of 2005-07-29 04:00 UTC
http://www.amsat.org/amsat/ariss/news/ISS_frequencies_and_Doppler_correction.rtf

Listing of ARISS related magazine articles as of 2006-07-10 03:30 UTC:
http://www.amsat.org/amsat/ariss/news/ARISS_magazine_articles.rtf

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There has been a rumor that the ISS was having direct contacts on the 40 meter band. There is no HF radio equipment on board and available yet.
The HF antenna is mounted. Sometimes WA3NAN will retransmit shuttle audio.

Expedition 13/14 on orbit:
Thomas Reiter DF4TR

Expedition 14 on orbit:
Michael Lopez-Alegria KE5GTK
Mikhail Tyurin, RZ3FT

Expedition 14 future:
Sunita Williams, KD5PLB

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[ANS thanks Charlie Sufana AJ9N, for the above information]

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SB SAT @ AMSAT $ANS-316.03
NASA activates UHF SDR aboard MRO

AMSAT News Service Bulletin 316.03
From AMSAT HQ SILVER SPRING, MD.
November 12, 2006
To All RADIO AMATEURS
BID: $ANS-316.03

On Monday, 6 November 2006, the Electra software-defined UHF transponder aboard the Mars Reconnaissance Orbiter was activated in order to relay communications to and from the Spirit rover on the surface of Mars. During the 4.2 minute MRO pass, 31 megabits of data from Spirit were acquired at a return link rate of 128 kilobits per second while simultaneously sending a small forward-link file to the rover. This is the first deep-space use of a software-defined radio by NASA.

[ANS thanks Jan, WB6VRN, for the above information]

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SB SAT @ AMSAT $ANS-316.04
Want Eagle to be built and launched?

AMSAT News Service Bulletin 316.04
From AMSAT HQ SILVER SPRING, MD.
November 12, 2006
To All RADIO AMATEURS
BID: $ANS-316.04

Recent legislation passed by Congress and signed by President Bush can help make that happen. The law, called the Pension Protection Act (PPA), includes
a provision enabling AMSAT to raise substantially more money than might have
been previously possible.

You know how important money is to getting Eagle into orbit.

Basically, here's the story on how the new law can help Eagle fly!.

The PPA provides that U.S. taxpayers with IRAs who have reached the age of 70-1/2, may contribute to qualified charities, part or all (up to $100,000),
of the money they must annually withdraw from their IRAs.

Thus, many AMSAT members and other supporters of the amateur radio space program have a marvelous opportunity to keep the Eagle project on track.

If you must withdraw a certain amount from your IRA each year, there is a big
advantage to making such withdrawals as direct contributions to AMSAT rather
than merely receiving the distributions and then contributing in the usual manner. Under PPA, the amount you contribute directly is NOT counted as income and thus may put you into a lower tax bracket. It may also reduce the
percentage of your Social Security income subject to taxation.

Key provisions of the new legislation to keep in mind:

1. Donors must hold either a conventional or Roth IRA.

2. Donors must be at least 70-1/2 years of age.

3. Contributions must be made directly from the IRA to the charitable organization not to a donor- advised fund, private foundation, gift annuity or trust.

4. Donations may be made this year and next only, and must be made by December
31, 2006 and December 31, 2007.

5. The maximum amount a contributor may donate each year is $100,000.

6. Direct contributions to qualified charities from IRAs, in accordance with
the PPA provisions, are NOT counted as taxable income.

If you are 70-1/2 or older and have an IRA, you are in a position to take advantage of this potential windfall for the Eagle project. AMSAT urges you to first check with your tax advisor for specifics regarding your individual
situation, then ask your IRA custodian to transfer to AMSAT part or all of what you are required to withdraw. Be sure to have this transfer completed before December 31st.

Let's all of us do our part to get Eagle into orbit.

* Have your IRA custodian call the AMSAT office to get information on how to
transfer your contribution. The number 301-589-6062. Office hours are 10 AM to 6 PM EST.

[ANS thanks BIll, W5XO, for the above information]

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SB SAT @ AMSAT $ANS-316.05
Looking for a Digital designer to help with PCSAT-3

AMSAT News Service Bulletin 316.05
 From AMSAT HQ SILVER SPRING, MD.
November 12, 2006
To All RADIO AMATEURS
BID: $ANS-316.05

PCSAT-3 will hopefully be similar to PCSAT-1 and PCSAT2 including a PSK-31 transponder and of course the usual packet digipeaters.... AND...

But it also will have a large surface area that we want to see if we can HEAR
micrometeor impacts, and with four microphones and DSP see if we can locate the point of impact. This will require working with a high-end PIC processor
that has a DSP code operating at up to 1 MHz sample rate (500 KHz bandwidth),
12 bit resolution, and sensitivity down to 10ths of a milli-volt.

Supposedly we have a "software" guy, but we don't have a digital designer to
lay out the 80-pin-PIC processor board, including all the low noise front end
to avoid the inevitable noise in the system and a huge amount of FLASH ram to

record the data.

If it works, and the PIC detects a hit, then not only would it save the data
science purposes, but then we can reply it on the FM downlink as audio for everyone to hear. Expectations are maybe 3 hits per day average?

Anyway, if anyone is an excellent digital designer, with time on their hands
and is interested in this project, let me know. Thanks Bob, WB4APR

[ANS thanks Bob, WB4APR, for the above information]

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SB SAT @ AMSAT $ANS-316.06
Global Educational Network for Satellite Operations

AMSAT News Service Bulletin 316.06
 From AMSAT HQ SILVER SPRING, MD.
November 12, 2006
To All RADIO AMATEURS
BID: $ANS-316.06

An ESA Assessment Study for this project began in June 2006 and a large number of the study team attended the AMSAT-UK 2006 Colloquium as part of the SSETI contingent. AMSAT-UK representatives (including the Ed.) were invited to attend their break-out meeting by Neil Mellville of ESA.

In the meeting, AMSAT-UK received a briefing on the purpose of GENSO. Which is to provide a global infrastructure that will be available for future educational satellite projects. By increasing communication time from an average of 3% to a potential 60%, it will become possible to access spacecraft data in real time at low cost.

As a result of this, AMSAT-UK joined with ESA, the SSETI Association, UNISEC, and several universities around the world, to determine the technical feasibility of the project and define a comprehensive set of technical requirements with suggested design solutions.

A month later, the first workshop was held at the University of Tokyo to discuss the proposal and the potential for inter-continental collaboration. The response from the amateur radio and academic communities was particularly promising.

The implementation plan produced at the second workshop, held in ESTEC in late September, included work packages, a preliminary schedule and a budget framework. On 5 October, this plan was presented to the International Space Education Board during the International Astronautical Congress in Valencia.

The Board gave the go-ahead to start the design and implementation of the software and hardware, with objective of running a pilot phase in around a years time. They are planning a workshop next February to discuss our progress and the core features should be ready for testing by mid-2007. If all goes according to plan, they hope to have the network fully operational from November 2008 onwards.

Over the coming months, ESA will provide funding for software development and overall project management, with the other space agencies on the board, CSA, JAXA and NASA, sponsoring involvement from Canada, Japan and the USA respectively.

"One of the key aspects of this project will be that the network is

developed 'by students for students', with the technical support and guidance of the space agencies and the radio amateur community," said Neil Melville of ESA.

AMSAT-UK has been asked to define the typical ground station in terms of hardware and to provide supporting software. Therefore, watch out for a questionnaire appearing on AMSAT-BB for your thoughts.

The data collection and ground station software, developed as part of the project will be made available to the AMSAT community.

More information can be found at:

http://www.esa.int/esaED/SEM8HFZBYTE_index_0.html

[ANS thanks ESA & AMSAT-UK, for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

73, This week's ANS Editor,
Dave Johnson, G4DPZ